FILM PRODUCTION ANALYSIS

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INTRODUCTION

- The **main objective** of this analysis was to explore a data-driven approach that aims to offer tactical guidance to the launch of a new movie studio based on trends in movie success.

- With the entertainment business evolving, more studios and streaming platforms are targeting to invest in original content hence the need to know what drives the box office.

BUSINESS UNDERSTANDING

Context: Our company aims to venture into the movie production industry hence, it is crucial to understand the characteristics of top-performing films at the box office.

Goal: Use data analysis to gather insights that will help our new movie studio create films that are not only critically acclaimed but also financially successful.

Key Business Questions
- What genres and budget ranges are most successful?
- How do release dates impact film performance?
- What are the characteristics of the highest-grossing films?

BUSINESS UNDERSTANDING

Business Value

- **Market Entry:** Venturing into the industry with a data-backed strategy increases the likelihood of success.

- **Investment Efficiency:** Insights will help allocate resources effectively, reducing financial risks.

- **Competitive Advantage:** Understanding market trends will allow for the creation of appealing content that attracts audiences.
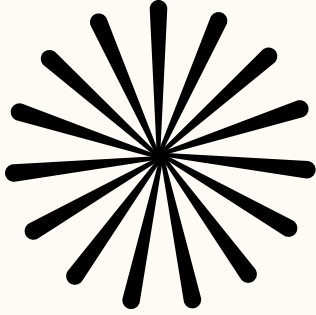
DATA UNDERSTANDING

The data for this analysis was obtained from multiple reputable sources:

- **Box Office Mojo:** Provides comprehensive box office revenue data.
- **IMDB:** A rich source of movie ratings, genres, and other detailed movie information.
- **Rotten Tomatoes:** Offers critical and audience reviews and ratings.
- **TheMovieDB:** Contains detailed movie information, including genres, ratings, and runtime.
- **The Numbers:** Provides financial data on movie budgets and grosses.

DATA OVERVIEW

Key features selected for analysis

1. **Genre** – helps in understanding audience preferences and market trends.
2. **Release date** – timing of film release impacts its performance.
3. **Original language** – impacts a film's accessibility and appeal in different regions and markets.
4. **Runtime minutes** – influences audience engagement and theater scheduling.
5. **Average Rating** – reflects its reception and perception.
6. **Production budget** – the cost to produce a film.
7. **Gross revenues** – box office earnings, both domestic and worldwide.

ANALYSIS PROCESS
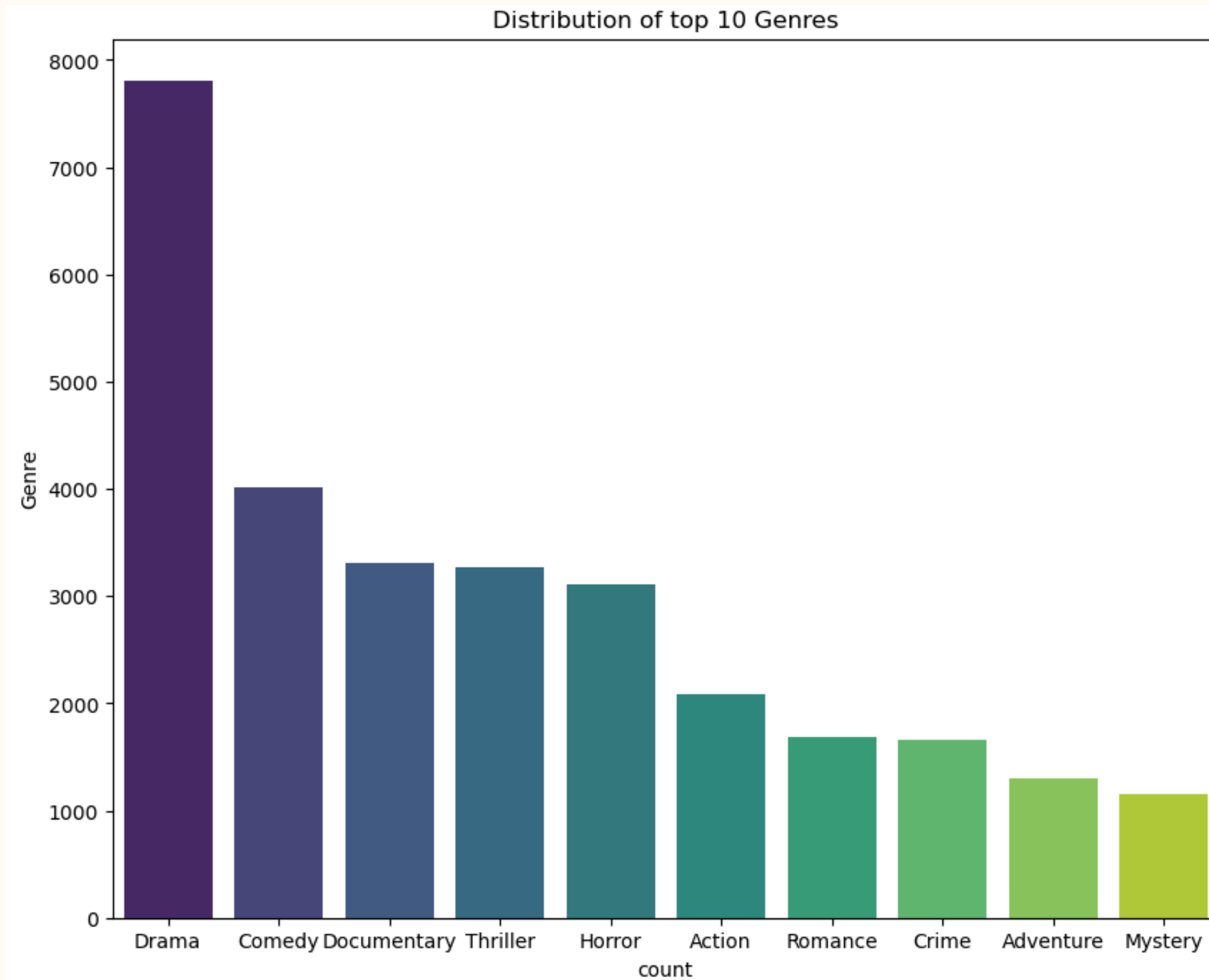
DATA CLEANING

EXPLORATORY DATA ANALYSIS
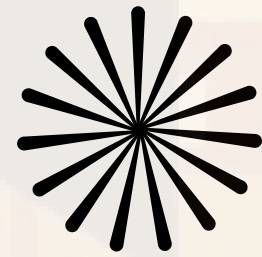
DATA CLEANING

1. Handling missing values.
2. Removing duplicate values.
3. Standardizing the data
4. Feature engineering
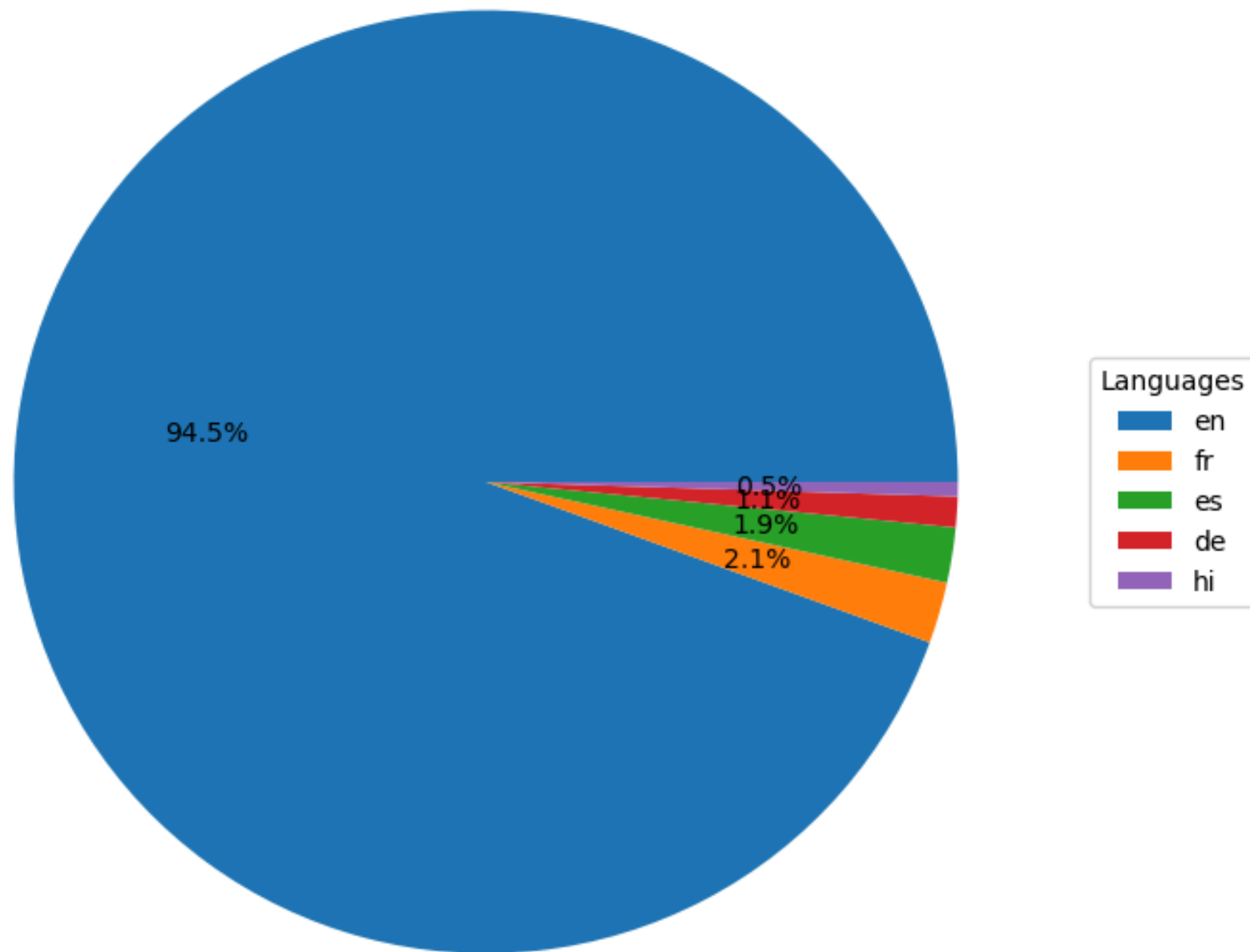5. Combined relevant features for use.

EXPLORATORY DATA ANALYSIS

Analyzing distribution of top produced genres

Distribution of top 10 Genres

The top produced genres are drama (7805), comedy(4014) and documentary (3304).

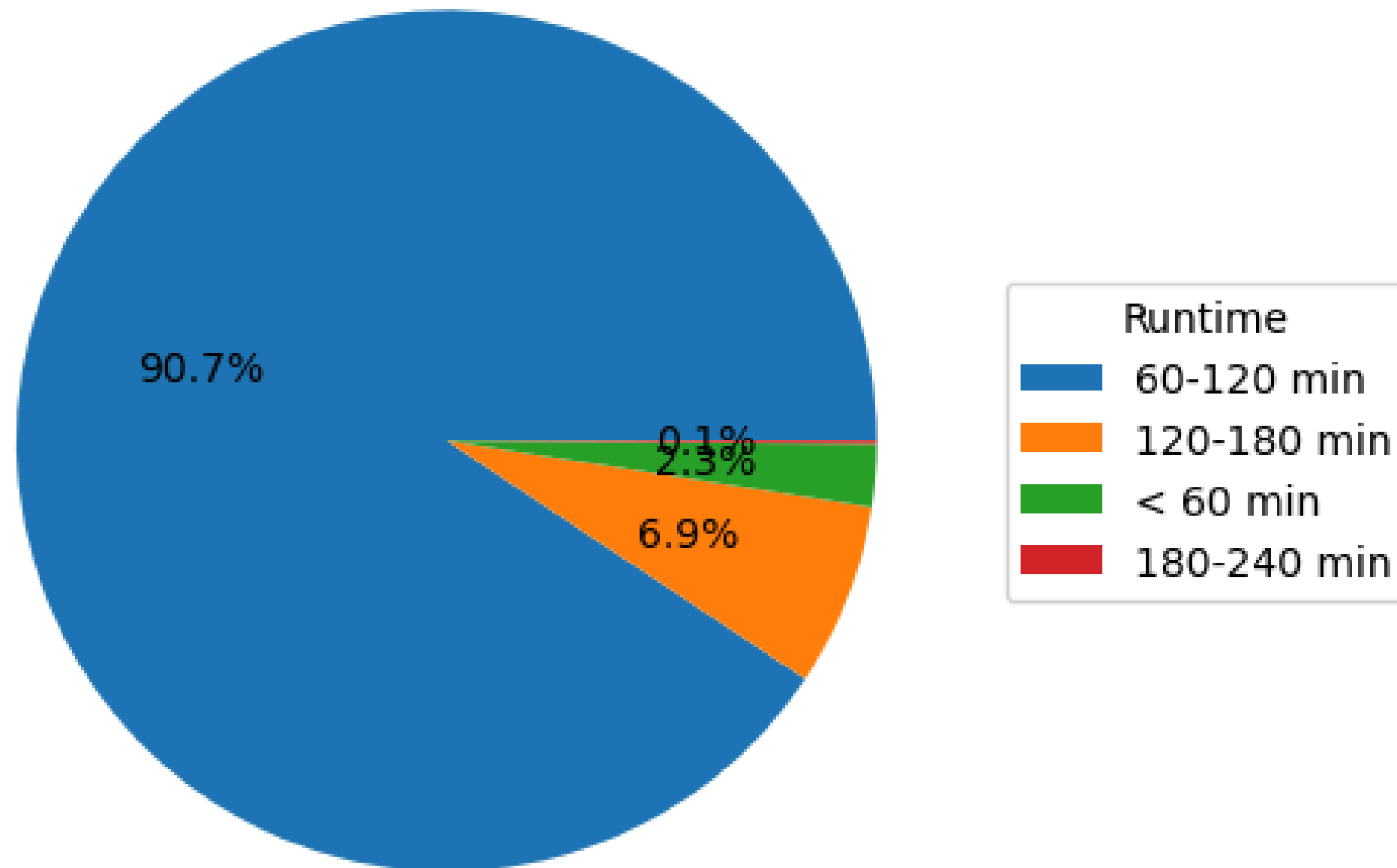# Analyzing distribution of most used Language

Top 5 Languages for Films

1. **94.5%** of the films are in English (en)
2. 2.1% are in French (fr)
3. 1.9% are in spanish (es)
4. 1.1% are in German/Deutsch (de)
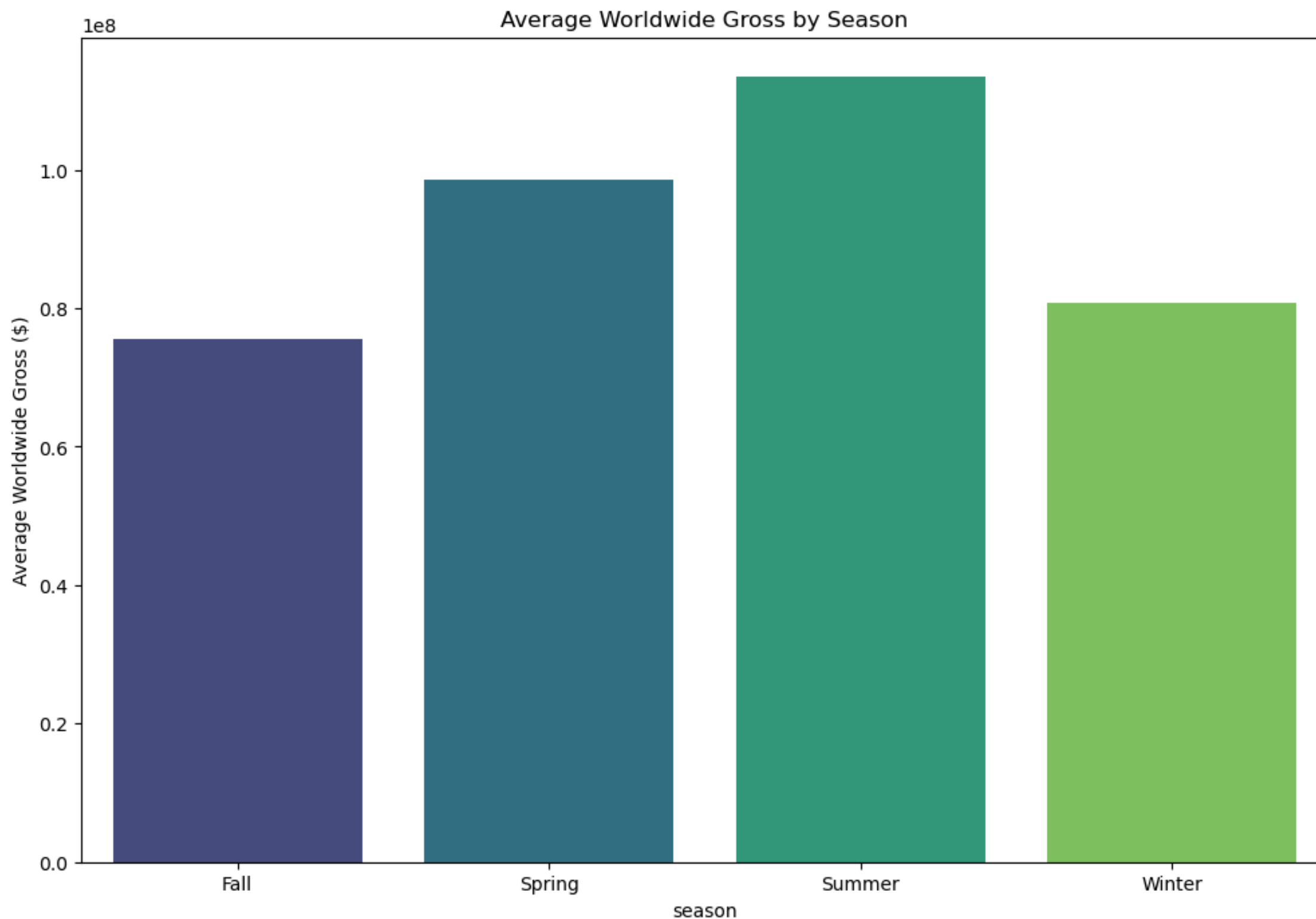5. 0.5% are in Hindi (hi)

Analyzing distribution of Runtime Minutes

Average Length of a Film in Minutes

- **87.7%** of the films are 60–120 minutes long.
- 6.7% of films are 120–180 minutes long.
- 5.5% of films are less than 60minutes long.
- 0.1% of the films are 180–240 minutes long.

Analyzing seasonal and monthly trends for movie releases


Average Worldwide Gross by Season

Most movies perform best in the summer with an average worldwide gross of $113M and least in the fall averagely $75M.

Analyzing the performance of films in different budget ranges
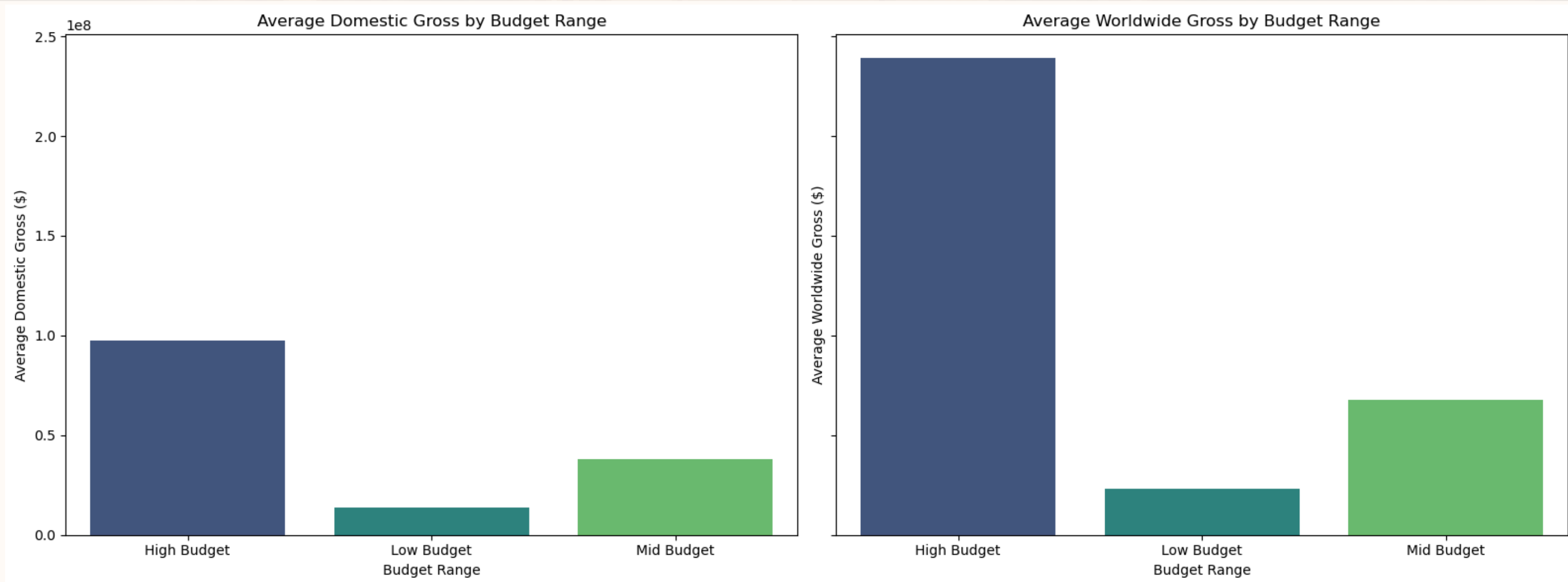
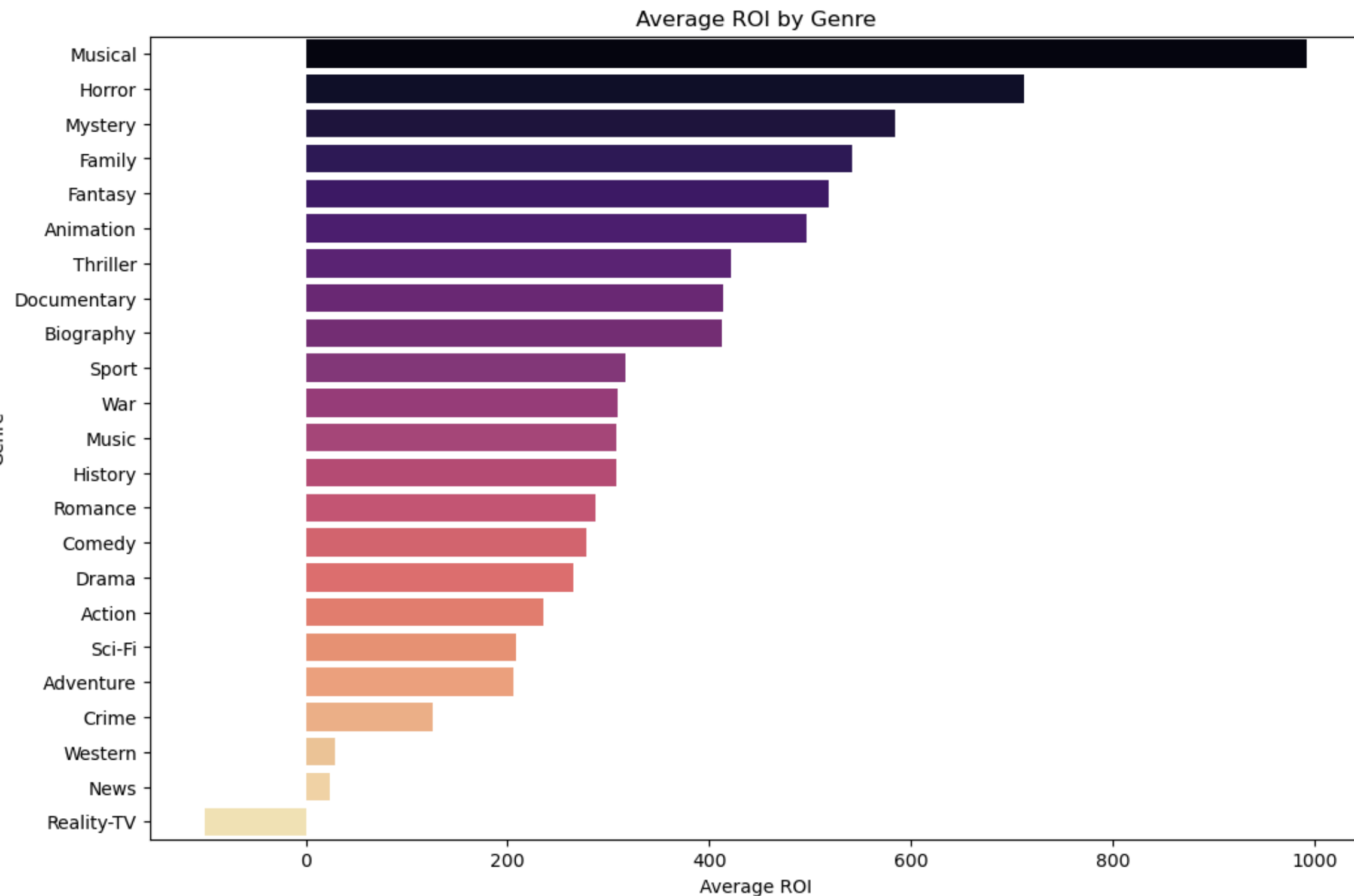The higher the production budget the higher the returns both domestic ($97M) and worldwide ($238M).

Analyzing the highly rated genres

Average Movie Ratings by Genre
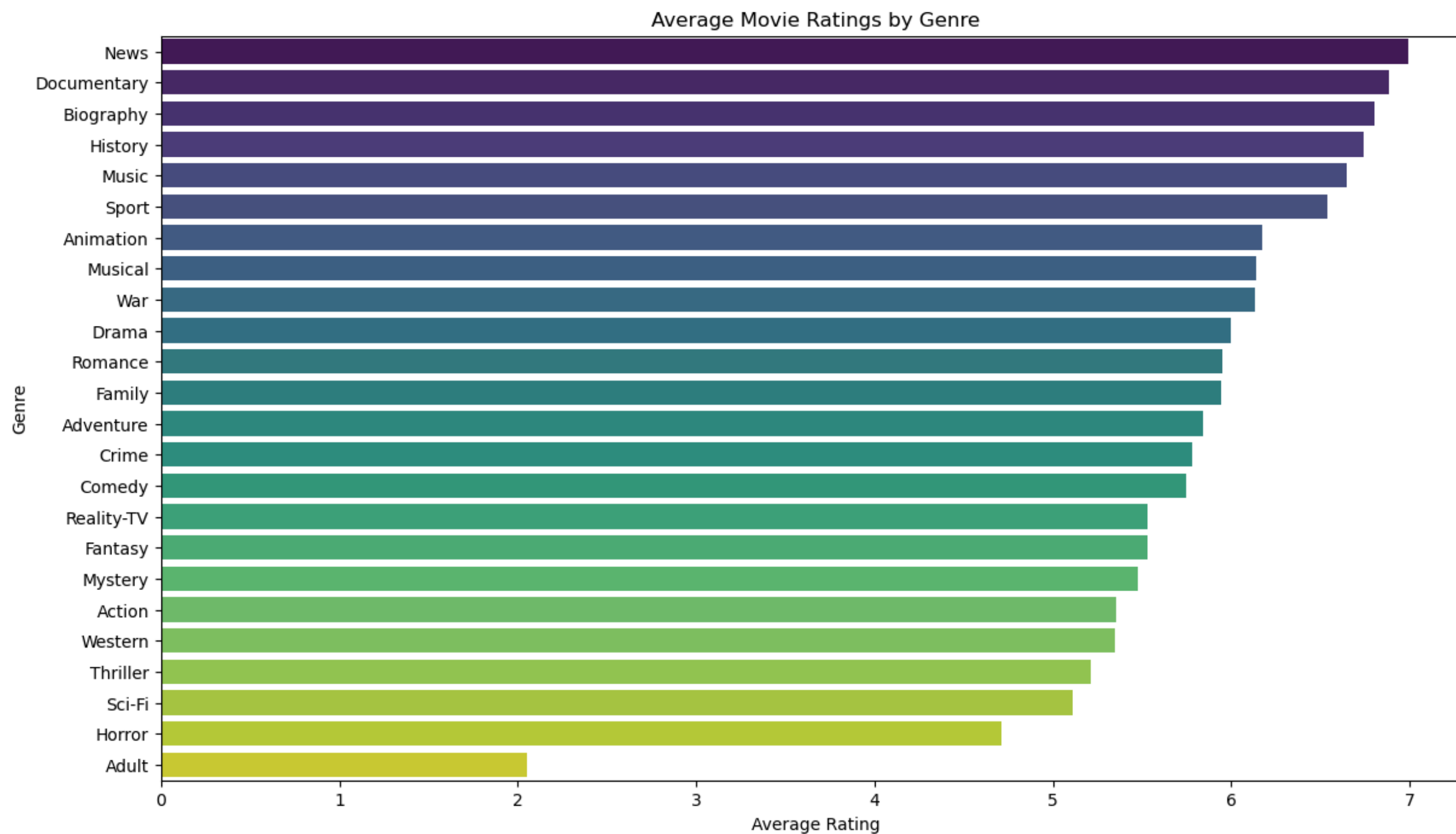
News (6.99), Documentary (6.88) and Biography (6.80) are the highly rated film genres.

Identifying the Genre with the highest Return on Investment (ROI)

Average ROI by Genre

Musical films have the highest return on investment (991.36) followed by horror (712.20) and Mystery (584.23).

RECOMMENDATIONS

1. Focus on Producing Highly Profitable Genres

– Invest in producing Musical, Horror, and Mystery genres.

– By targeting these genres, the studio can maximize profitability and achieve a higher return on their investment.

2. Leverage Seasonal and Monthly Release Trends

– Release Films During Summer: The data shows that movies released in the summer perform the best, with an average worldwide gross of $113M.

– Avoid Fall Releases: Films released in the fall tend to perform the worst, with an average worldwide gross of $75M.

RECOMMENDATIONS

3. Maintain a Balanced Budget for Optimal Returns

– Optimize Production Budgets: While higher budgets often correlate with higher grosses, it is crucial to find a balance.

– Monitor Budget Allocation: Ensure that the production budget is carefully planned and monitored to avoid overspending while still achieving high production quality that attracts large audiences.

4. Capitalize on Top-Rated Genres

– Focus on Quality Content in News, Documentary, and Biography Genres.

CONCLUSION

Key Insights

- Musicals, Horror, and Mystery genres offers the highest financial returns.
- News, Documentary, and Biography genres receive consistently high audience ratings, indicating strong potential for long-term success.
- Summer releases yield the highest average worldwide gross, making it the best time for new movie releases.
- Mid to high-budget films show a strong positive correlation with gross revenue, highlighting the importance of careful budget planning for better financial outcomes.

By following these recommendations, the new movie studio can create films that are both critically acclaimed and financially successful , establishing a strong foothold in the competitive entertainment industry.

NEXT STEPS

- **Pilot Projects:** Launch a few pilot films incorporating the insights gained to test their performance.

- **Market Research:** Conduct audience surveys and focus groups to understand preferences and refine content strategies.

- **Competitor Analysis:** Study the strategies of successful film studios to identify best practices and areas for improvement.

THANK YOU!
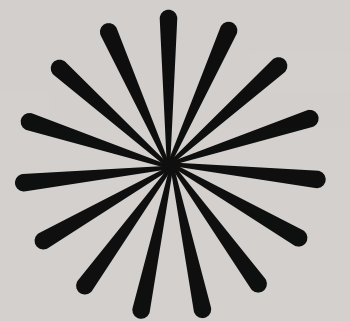
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